

**Notice of Allowability**

Application No.

10/669,410

Examiner

Marivelisse Santiago-Cordero

Applicant(s)

LIE ET AL.

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the communication filed on 11/7/06.
2. ☒ The allowed claim(s) is/are 3 and 4.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Kun Lie on 11/15/06.

3. The application has been amended as follows:

Claim 3 (Currently Amended): An apparatus [[impedance variation detector (IVD) design as part of an apparatus]] for routing a mobile phone incoming call to a connected land-line telephone, the apparatus comprising:

an interface to connect with a headphone outlet of the [[connected]] mobile phone to receive ringer and voice AC signals from said mobile phone as input;

an RJ11 port arranged to be interfaced with a first cable, said first cable being arranged to be coupled to said land-line telephone in order to send a DC voltage sufficient to drive a ringer of said land-line telephone and to output an AC voltage for voice conversation;

an approximately 110V AC power plug arranged to be connected to an approximately 110V AC power supply that is arranged to provide sufficient power to operate said apparatus;

a power supply circuit to convert an approximately 110V AC power [[current]] to an approximately 11V DC power [[current]];

Art Unit: 2617

a voltage driver circuit arranged to split the approximately 11V DC power into an approximately 8V DC power and an approximately 11V DC power;

a ring tone generator (RTG) arranged to be interfaced to the headphone outlet of the connected mobile phone which, upon receiving an incoming call, outputs an approximately 3V AC signal, the approximately 3V AC signal being arranged to generate a series of high-low voltage cycles to drive the ringer of said land-line telephone; and

an impedance variation detector (IVD) arranged to, upon detecting a line resistance variation caused by lifting or hanging-up telephone handset from a hook of said land-line telephone, switch the approximately 11V DC power to said RTG to silence the ringer of said land-line telephone or to prepare for the approximately 3V AC signal that is arranged to drive the ringer of said land-line telephone,

wherein said IVD comprises:

a high pass filter circuit that is configured to attenuate substantially low frequency signal in a human voice range, the high pass filter including at least one resistor, at least one induction coil, and at least one capacitor;

a capacitor arrangement arranged to remove high frequency background noise;

a diode arrangement arranged to regulate a current direction and to compensate for a parasitic AC voltage; and

a differential amplifier arranged to drive a mechanical relay unit.

Art Unit: 2617

Claim 4 (Currently Amended): The [[RTG design as part of the]] apparatus recited in claim 3 [[1]], wherein the RTG includes a clock generator and a circuit design, the circuit design being arranged to provide the approximately 11V DC power supply to the clock generator upon detecting the approximately 3V AC [[voice]] signal input from the connected mobile phone, the circuit design comprising:

a ring tone connecting device having an emitter diode and a receiver diode arranged to detect the approximately 3V AC signal input from said mobile phone;

a transistor arranged to compensate for a low frequency analog signal;

a diode arranged to regulate a current direction;

a high frequency filtering capacitor;

the [[a]] mechanical relay having [[that has]] a default ON state, the mechanical relay being arranged between the IVD and the RTG, the mechanical relay including an inductor and approximately three terminals [[that are]] arranged to switch off the approximately 11VDC power supply when the IVD detects a line resistance variation of said land-line telephone; and

a voltage stabilizing zener diode arrangement and a MOSFET transistor arranged to turn on a connection for the approximately 11V DC power [[supply]] through the mechanical relay to the clock generator.

***Allowable Subject Matter***

4. Claims 3-4 (renumbered as Claims 1-2, respectively) are allowed.
5. The following is an examiner's statement of reasons for allowance:

Claims 3-4 are allowed because the closes prior art of record Bacon et al. (Pub. No.: US 2004/0192338) either singularly or in combination, fail to anticipate or render obvious the

Art Unit: 2617

specific arrangements and circuitry components as claimed by applicant, i.e., an interface to connect with a headphone outlet of the mobile phone; a voltage driver circuit arranged to split the approximately 11V DC power into an approximately 8V DC power and an approximately 11V DC power; the RTG arranged to output an approximately 3V AC signal, the IVD arranged to switch the approximately 11V DC power to said RTG or to prepare for the approximately 3V AC signal, wherein said IVD comprises a high pass filter circuit, a capacitor arrangement, a diode arrangement, and a differential amplifier in combination with all other limitations in the claim(s) as defined by applicant.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marivelisse Santiago-Cordero whose telephone number is (571) 272-7839. The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571) 272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MSC 11/16/06

MSC



WILLIAM TROST  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600